BRUHAT BANGALORE MAHANAGARA PALIKE

Yelahanka Zone, Bangalore

MEASUREMENT SHEET

PRE-MEASUREMENT

Name of Work:	Impreovements to roads and drains in Tatanagaa, Devinagara and surrounding areas in ward no. 08, kodigehalli
Estimated Cost:	Rs. 100.00 Lakhs
Job Code / Indent No	008-22-000003
Head of Account:	P-3075 Special comprehensive development works
Name of Agency:	KM Nagesh
PMC:	
Amount put to Tender:	Rs. 87,53,33.75
Amount Tender Price:	Rs. 87,53,33.75
Percentage:	SR
Ref:	BBMP/EE/BTP/WO/60/2021-22 dated 18.03.2022
Period of Completion:	120 days

Sl. No.	Description	Unit	No	L (m)	B1 (m)	B2 (m)	D/H (m)	Qty.	Remarks
Pre-Measurements Recorded on:		11.04.2022							
1	Earthwork excavation by manual means for roads, drains and similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neartly after breaking of clods complete as per specifications.								
	RCC drain	Cum							
	11th main road Tatanagara right side from swd	Cum	1	10.00	1.10	1.10	1.10	12.10	
	Right side contd after culvert	Cum	3	30.00	1.10	1.10	1.10	108.90	
		Cum	1	12.00	1.10	1.10	1.10	14.52	
	Left side upto culvert	Cum	2	30.00	1.30	1.30	1.50	117.00	
		Cum	1	17.00	1.30	1.30	1.50	33.15	
	Beyond culvert	Cum	1	30.00	1.10	1.10	1.10	36.30	
		Cum	1	20.00	1.10	1.10	1.10	24.20	
	1st main road from 5th crs right side upto 6th A crs	Cum	1	32.00	1.10	1.10	1.10	38.72	
	Beyond 6th A crs	Cum	3	30.00	1.10	1.10	1.10	108.90	
		Cum	1	18.00	1.10	1.10	1.10	21.78	
	1st main left side	Cum	1	32.00	1.10	1.10	1.10	38.72	
	Beyond 6th A crs	Cum	3	30.00	1.10	1.10	1.10	108.90	
		Cum	1	18.00	1.10	1.10	1.10	21.78	
	Adj kodava cuisine road-left	Cum	3	30.00	1.10	1.10	1.10	108.90	
		Cum	1	10.00	1.10	1.10	1.10	12.10	
	Adj kodava cuisine road-right	Cum	3	30.00	1.10	1.10	1.10	108.90	
		Cum	1	10.00	1.10	1.10	1.10	12.10	
	culverts							0.00	
	11th main right side	Cum	1	8.70	1.20	1.20	1.20	12.52	
	11th main left side	Cum	1	8.00	1.20	1.20	1.20	11.52	

951.01

Contractor

Junior Engineer
Ward no. 8

Assistant Executive Engineer
Kodigehalli Sub Division

Sl. No.	Description	Unit	No	L (m)	B1 (m)	B2 (m)	D/H (m)	Qty.	Remarks
	6th A cross, 1st main road	Cum	1	11.00	1.20	1.20	1.20	15.84	
	6th A cross, 1st main road	Cum	1	10.00	1.20	1.20	1.20	14.40	
	5th main road	Cum	1	9.00	1.20	1.20	1.20	12.96	
		Cum					Total	994.21	
							Lim to	952.44	43.20
Pre-Measurements Recorded on:		16.04.2022							
2	Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications.								
	RCC drain								
	11th main road Tatanagara right side from swd	Cum	1	10.00	1.10	1.10	0.15	1.65	
	Right side contd after culvert	Cum	3	30.00	1.10	1.10	0.15	14.85	
		Cum	1	12.00	1.10	1.10	0.15	1.98	
	Left side upto culvert	Cum	2	30.00	1.30	1.30	0.15	11.70	
		Cum	1	17.00	1.30	1.30	0.15	3.31	
	Beyond culvert	Cum	1	30.00	1.10	1.10	0.15	4.95	
		Cum	1	20.00	1.10	1.10	0.15	3.30	
	1st main road from 5th crs right side upto 6th A crs	Cum	1	32.00	1.10	1.10	0.15	5.28	
	Beyond 6th A crs	Cum	3	30.00	1.10	1.10	0.15	14.85	
		Cum	1	18.00	1.10	1.10	0.15	2.97	
	1st main left side	Cum	1	32.00	1.10	1.10	0.15	5.28	
	Beyond 6th A crs	Cum	3	30.00	1.10	1.10	0.15	14.85	
		Cum	1	18.00	1.10	1.10	0.15	2.97	
	Adj kodava cuisine road-left	Cum	3	30.00	1.10	1.10	0.15	14.85	
		Cum	1	10.00	1.10	1.10	0.15	1.65	
	Adj kodava cuisine road-right	Cum	3	30.00	1.10	1.10	0.15	14.85	
		Cum	1	10.00	1.10	1.10	0.15	1.65	
	culverts	Cum						0.00	
	11th main right side	Cum	1	8.70	1.20	1.20	0.15	1.56	
	11th main left side	Cum	1	8.00	1.20	1.20	0.15	1.44	
	6th A cross, 1st main road	Cum	1	11.00	1.20	1.20	0.15	1.98	
	6th A cross, 1st main road	Cum	1	10.00	1.20	1.20	0.15	1.80	
	5th main road	Cum	1	9.00	1.20	1.20	0.15	1.62	
		Cum					Total	129.34	
							Lim to	126.78	
3. Pre-Measurements Recorded on:		20.04.2022							

Contractor

Junior Engineer
Ward no. 8

Assistant Executive Engineer
Kodigehalli Sub Division

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Sl. No.	Description	Unit	No	L (m)	B1 (m)	B2 (m)	D/H (m)	Qty.	Remarks
3	Providing TMT/ Fe 500 steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. 20/4/22.								
	Along the drain, 10mm dia bar								
1	11th main road Tatanagara right side from swd	kg	15	9.95	@		0.62	92.53	
3	Right side contd after culvert	kg	15	29.95	@		0.62	835.60	
1		kg	15	11.95	@		0.62	111.13	
2	Left side upto culvert	kg	23	29.95	@		0.62	854.17	
1		kg	23	16.95	@		0.62	241.70	
1	Beyond culvert	kg	15	29.95	@		0.62	278.53	
1		kg	15	19.95	@		0.62	185.53	
1	1st main road from 5th crs right side upto 6th A crs	kg	15	31.95	@		0.62	297.13	
3	Beyond 6th A crs	kg	15	29.95	@		0.62	835.60	
1		kg	15	17.95	@		0.62	166.93	
1	1st main left side	kg	15	31.95	@		0.62	297.13	
3	Beyond 6th A crs	kg	15	29.95	@		0.62	835.60	
1		kg	15	17.95	@		0.62	166.93	
3	Adj kodava cuisine road-left	kg	15	29.95	@		0.62	835.60	
1		kg	15	9.95	@		0.62	92.53	
3	Adj kodava cuisine road-right	kg	19	29.95	@		0.62	1058.43	
1		kg	19	9.95	@		0.62	117.21	
	culverts	kg						0.00	X
2	11th main right side	kg	19	8.60	@		0.89	290.85	
2	11th main left side	kg	19	7.90	@		0.89	267.17	
2	6th A cross, 1st main road	kg	19	10.90	@		0.89	368.63	
2	6th A cross, 1st main road	kg	19	9.90	@		0.89	334.81	
2	5th main road	kg	19	8.90	@		0.89	300.99	
	across the drain, 10mm dia bar							0.00	X
1	11th main road Tatanagara right side from swd	kg	67	2.25	@		0.62	93.46	
3	Right side contd after culvert	kg	200	2.25	@		0.62	837.00	
1		kg	80	2.25	@		0.62	111.60	
2	Left side upto culvert	kg	200	3.35	@		0.62	830.80	
1		kg	113	3.35	@		0.62	234.70	
1	Beyond culvert	kg	200	2.25	@		0.62	279.00	
1		kg	133	2.25	@		0.62	185.53	
1	1st main road from 5th crs right side upto 6th A crs	kg	213	2.25	@		0.62	297.13	

11733-95

Contractor

Junior Engineer
Ward no. 8

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Sl. No.	Description	Unit	No	L (m)	B1 (m)	B2 (m)	D/H (m)	Qty.	Remarks
3	Beyond 6th A crs	kg	200	2.25	@		0.62	837.00	
1		kg	120	2.25	@		0.62	167.40	
1	1st main left side	kg	213	2.25	@		0.62	297.13	
3	Beyond 6th A crs	kg	200	2.25	@		0.62	837.00	
1		kg	120	2.25	@		0.62	167.40	
3	Adj kodava cuisine road-left	kg	200	2.25	@		0.62	837.00	
1		kg	67	2.25	@		0.62	93.46	
3	Adj kodava cuisine road-right	kg	200	2.25	@		0.62	837.00	
1		kg	67	2.25	@		0.62	93.46	
	culverts	kg						0.00	
2	11th main right side	kg	58	2.85	@		0.89	294.23	
2	11th main left side	kg	53	2.85	@		0.89	268.86	
2	6th A cross, 1st main road	kg	73	2.85	@		0.89	370.32	
2	6th A cross, 1st main road	kg	66	2.85	@		0.89	334.81	
2	5th main road	kg	60	2.85	@		0.89	304.38	5739.45
	Total	kg						16195.03	17423.40
	Total	MT					Total	16.19	17.42
		MT					Lim to	15.81	15.81
Pre-Measurements Recorded on:		25.04.2022							
7	Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications.								
	Below kerb stones								
	11th main road Tatanagara right side from swd	Cum	1	10.00	0.20	0.20	0.10	0.20	
	Right side contd after culvert	Cum	3	30.00	0.20	0.20	0.10	1.80	
		Cum	1	12.00	0.20	0.20	0.10	0.24	
	Left side upto culvert	Cum	2	30.00	0.20	0.20	0.10	1.20	
		Cum	1	17.00	0.20	0.20	0.10	0.34	
	Beyond culvert	Cum	1	30.00	0.20	0.20	0.10	0.60	
		Cum	1	20.00	0.20	0.20	0.10	0.40	
	1st main road from 5th crs right side upto 6th A crs	Cum	1	32.00	0.20	0.20	0.10	0.64	
	Beyond 6th A crs	Cum	3	30.00	0.20	0.20	0.10	1.80	
		Cum	1	18.00	0.20	0.20	0.10	0.36	
		Cum					Total	7.58	
							Lim to	7.40	

Contractor

Junior Engineer
Ward no. 8

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Sl. No.	Description	Unit	No	L (m)	B1 (m)	B2 (m)	D/H (m)	Qty.	Remarks
Pre-Measurements Recorded on:		25.04.2022							
10	Excavation of road work in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes in accordance with requirement of lines, grade and cross section and transportation with a lead of 5km and complete as per specifications.								
	Tatanagara								
	11 main road from swd 9th crs road	Cum	1	30.00	7.20	6.30	0.30	60.75	
		Cum	1	30.00	6.30	5.20	0.30	51.75	
		Cum	1	30.00	5.20	5.00	0.30	45.90	
		Cum	1	18.00	5.00	6.20	0.30	30.24	
		Cum					Total	188.64	
							Lim to	188.25	
Pre-Measurements Recorded on:		28.04.2022							
11	Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications.								
	11 main road from swd 9th crs road	Sqm	1	30.00	7.20	6.30		202.50	
		Sqm	1	30.00	6.30	5.20		172.50	
		Sqm	1	30.00	5.20	5.00		153.00	
		Sqm	1	18.00	5.00	6.20		100.80	
	Total	Sqm					Total	628.80	
							Lim to	627.50	
Pre-Measurements Recorded on:		05.05.2022							
12	Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications.								
	11 main road from swd 9th crs road	cum	1	30.00	7.20	6.30	0.15	30.37	
		cum	1	30.00	6.30	5.20	0.15	25.87	
		cum	1	30.00	5.20	5.00	0.15	22.95	
		cum	1	18.00	5.00	6.20	0.15	15.12	
	Total	cum					Total	94.31	
							Lim to	94.12	

Contractor

Junior Engineer
Ward no. 8

Assistant Executive Engineer
Kodigehalli Sub Division

Assistant Executive Engine
Kodigehalli Sub Division
BBMP, Bangalore

Sl. No.	Description	Unit	No	L (m)	B1 (m)	B2 (m)	D/H (m)	Qty.	Remarks
Pre-Measurements Recorded on:		12.05.2022							
14	Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications.								
	11 main road from swd 9th crs road	sqm	1	30.00	7.20	6.30		202.50	
		sqm	1	30.00	6.30	5.20		172.50	
		sqm	1	30.00	5.20	5.00		153.00	
		sqm	1	18.00	5.00	6.20		100.80	
	continued	sqm	1	12.00	1.00	1.00		12.00	
		sqm	1	24.00	1.00	1.00		24.00	
	5th crs from 5th main to 6th main	sqm	1	38.50	1.00	1.00		38.50	
	5th cross from 6th main to 11th main road	sqm	1	30.00	1.00	1.00		30.00	
		sqm	1	30.00	1.00	1.00		30.00	
		sqm	1	30.00	1.00	1.00		30.00	
		sqm	1	30.00	1.00	1.00		30.00	
		sqm	1	30.00	1.00	1.00		30.00	
		sqm	1	30.00	1.00	1.00		30.00	
		sqm	1	30.00	1.00	1.00		30.00	
		sqm	1	30.00	1.00	1.00		30.00	
		sqm	1	1.00	1.00	1.00		1.00	
	Total	sqm					Total	944.30	
							Lim to	627.50	
Pre-Measurements Recorded on:		12.05.2022							
15	Providing and laying bituminous macadam on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixd material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by power roller to achieve the desired density, but excluding cost of primer / tack coat including lead, lift and cost of all materials, labour, HOM of machineries complete as per specifications. MORTH /Chapter 5 - using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 3.3 % VG-30 Bitumen								
	11th main road Tatanagara	cum	3	30.00	1.50	1.50	0.05	6.75	
		cum	1	18.00	1.50	1.50	0.05	1.35	
	11 main road from swd 9th crs road	cum	1	30.00	7.20	6.30	0.05	10.12	
		cum	1	30.00	6.30	5.20	0.05	8.62	
		cum	1	30.00	5.20	5.00	0.05	7.65	
		cum	1	18.00	5.00	6.20	0.05	5.04	
		cum	1	12.00	1.00	1.00	0.05	0.60	
		cum	1	24.00	1.00	1.00	0.05	1.20	
	5th crs from 5th main to 6th main	cum	1	38.50	1.00	1.00	0.05	1.92	

43.25

Contractor

Junior Engineer
Ward no. 8

Assistant Executive Engineer
Kodigehalli Sub Division

Assistant Executive Enginee
Kodigehalli Sub Division
BBMP, Bangalore

Sl. No.	Description	Unit	No	L (m)	B1 (m)	B2 (m)	D/H (m)	Qty.	Remarks
	5th cross from 6th main to 11th main road	cum	1	30.00	1.00	1.00	0.05	1.50	
		cum	1	30.00	1.00	1.00	0.05	1.50	
		cum	1	30.00	1.00	1.00	0.05	1.50	
		cum	1	30.00	1.00	1.00	0.05	1.50	
		cum	1	30.00	1.00	1.00	0.05	1.50	
		cum	1	30.00	1.00	1.00	0.05	1.50	
		cum	1	30.00	1.00	1.00	0.05	1.50	
		cum	1	30.00	1.00	1.00	0.05	1.50	
		cum	1	1.00	1.00	1.00	0.05	0.05	12.05
	Total	cum					Total	55.30	
							Lim to	49.08	
Pre-Measurements Recorded on:		19.05.2022							
13	Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications.								
	11 main road from swd 9th crs road	sqm	1	30.00	7.20	6.30		202.50	
		sqm	1	30.00	6.30	5.20		172.50	
		sqm	1	30.00	5.20	5.00		153.00	
		sqm	1	18.00	5.00	6.20		100.80	
		sqm	1	12.00	6.20	6.20		74.40	
		sqm	1	24.00	6.20	6.30		150.00	
	5th crs from 5th main to 6th main	sqm	1	38.50	6.80	7.00		265.65	
	5th cross from 6th main to 11th main road	sqm	1	30.00	6.30	6.10		186.00	
		sqm	1	30.00	6.10	5.60		175.50	
		sqm	1	30.00	5.60	6.20		177.00	
		sqm	1	30.00	6.20	6.60		192.00	
		sqm	1	30.00	6.60	5.40		180.00	
		sqm	1	30.00	5.40	6.30		175.50	
		sqm	1	30.00	6.30	4.90		168.00	
		sqm	1	30.00	4.90	5.40		154.50	
	cross road on kote road	sqm	1	30.00	3.30	3.30		99.00	
		sqm	1	20.00	3.30	3.20		65.00	
	kote road	sqm	1	30.00	4.50	4.60		136.50	
		sqm	1	30.00	4.60	4.50		136.50	
		sqm	1	26.00	4.50	4.60		118.30	
	Total	sqm					Total	3082.65	
							Lim to	2725.00	

Contractor

Junior Engineer
Ward no. 8

Assistant Executive Engineer
Kodigehalli Sub Division

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore

Sl. No.	Description	Unit	No	L (m)	B1 (m)	B2 (m)	D/H (m)	Qty.	Remarks
Pre-Measurements Recorded on:		19.05.2022							
16	Providing and applying tack coat using 80/100 grade bitumen (VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all material, labour HOM of machineries complete as per specifications.								
	11 main road from swd 9th crs road	sqm	1	30.00	7.20	6.30		202.50	
		sqm	1	30.00	6.30	5.20		172.50	
		sqm	1	30.00	5.20	5.00		153.00	
		sqm	1	18.00	5.00	6.20		100.80	
		sqm	1	12.00	6.20	6.20		74.40	
		sqm	1	24.00	6.20	6.30		150.00	
	5th crs from 5th main to 6th main	sqm	1	38.50	6.80	7.00		265.65	
	5th cross from 6th main to 11th main road	sqm	1	30.00	6.30	6.10		186.00	
		sqm	1	30.00	6.10	5.60		175.50	
		sqm	1	30.00	5.60	6.20		177.00	
		sqm	1	30.00	6.20	6.60		192.00	
		sqm	1	30.00	6.60	5.40		180.00	
		sqm	1	30.00	5.40	6.30		175.50	
		sqm	1	30.00	6.30	4.90		168.00	
		sqm	1	30.00	4.90	5.40		154.50	
	cross road on kote road	sqm	1	30.00	3.30	3.30		99.00	
		sqm	1	20.00	3.30	3.20		65.00	
	kote road	sqm	1	30.00	4.50	4.60		136.50	
		sqm	1	30.00	4.60	4.50		136.50	
		sqm	1	26.00	4.50	4.60		118.30	
	Total	sqm					Total	3082.65	
							Lim to	3079.00	

Contractor

Junior Engineer
Ward no. 8

Assistant Executive Engineer
Kodigehalli Sub Division

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP, Bangalore